

BID SOLICITATION

Page 1 of 9
Printed: 1/10/2006



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
CAPITOL HILL
PROVIDENCE RI 02908

BUYER: JOHN COWELL
PHONE #: (401) 222 - 2142 ext. 114

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RHODE ISLAND COLLEGE
RIC-PURCHASING
600 MOUNT PLEASANT AVENUE
PROVIDENCE RI 02908

BID NUMBER: B05959

TITLE: FIRE ALARM SYSTEMS

BID OPENING DATE AND TIME:

02/10/2006 1:40 PM

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RHODE ISLAND COLLEGE
RIC SPECIAL INSTRUCTIONS
SEE BELOW RI N/A

Requisition Number(s): R87A067536

Item	Class-Item	Quantity	Unit	Unit Price	Total
	<p>THERE WILL BE A *** MANDATORY *** PRE-BID CONFERENCE ON 1/27/06 AT 10:00 AM.</p> <p>LOCATION: RHODE ISLAND COLLEGE PHYSICAL PLANT - CONFERENCE ROOM 600 MOUNT PLEASANT AVENUE PROVIDENCE, RI 02908</p> <p>BIDDER IS REQUIRED TO PROVIDE A BID SURETY IN THE FORM OF A BID BOND, OR A CERTIFIED CHECK PAYABLE TO THE STATE OF RHODE ISLAND, IN THE AMOUNT OF A SUM NOT LESS THAN FIVE PERCENT (5%) OF THE BID PRICE. BID SURETY MUST BE ATTACHED TO THE BID FORM. THE SUCCESSFUL BIDDER WILL ALSO BE REQUIRED TO FURNISH PERFORMANCE AND LABOR AND PAYMENT BONDS AT TIME OF TENTATIVE CONTRACT AWARD.</p>				

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	<p>BIDDERS ARE ADVISED THAT ALL PROVISIONS OF TITLE 37 CHAPTER 13 OF THE GENERAL LAWS OF RHODE ISLAND APPLY TO THE WORK COVERED BY THIS REQUEST, AND THAT PAYMENT OF THE GENERAL PREVAILING RATE OF PER DIEM WAGES AND THE GENERAL PREVAILING RATE FOR REGULAR, OVERTIME, AND OTHER WORKING CONDITIONS EXISTING IN THE LOCALITY FOR EACH CRAFT, MECHANIC, TEAMSTER, OR TYPE OF WORKMAN NEEDED TO EXECUTE THIS WORK IS A REQUIREMENT FOR BOTH CONTRACTORS AND SUBCONTRACTORS. THE PREVAILING WAGE TABLE MAY BE OBTAINED AT THE RI DIVISION OF PURCHASES HOME PAGE BY INTERNET at www.purchasing.state.ri.us. SELECT "INFORMATION" AND THEN SELECT "PREVAILING WAGE TABLE". THE STATE OF RHODE ISLAND USES THE GENERAL DECISION NUMBER RI20030001. PRINTING THE ENTIRE DOCUMENT AVERAGES APPROXIMATELY ONE MINUTE PER PAGE - YOU MAY WANT TO PRINT ONLY THE PAGES APPLICABLE TO YOUR BID. BIDDERS NOTE: IN THE EVENT THIS BID SPECIFIES PRICE OFFERS ON A TIME-AND-MATERIALS BASIS, i.e., AN HOURLY RATE, ANY OR ALL BIDS SUBMITTED IN AN AMOUNT LESS THAN THE PREVAILING RATE IN EFFECT FOR THE WORK COVERED BY THIS REQUEST AS OF THE DATE OF BID ISSUANCE SHALL BE REJECTED BY THE DIVISION OF PURCHASES.</p>				

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	AN INSURANCE CERTIFICATE IN COMPLIANCE WITH PROVISIONS OF ITEM 31 (INSURANCE) OF THE GENERAL CONDITIONS OF PURCHASE IS REQUIRED FOR COMPREHENSIVE GENERAL LIABILITY, AUTOMOBILE LIABILITY, AND WORKERS' COMPENSATION AND MUST BE SUBMITTED BY THE SUCCESSFUL BIDDER(S) TO THE DIVISION OF PURCHASES PRIOR TO AWARD. THE INSURANCE CERTIFICATE MUST NAME THE STATE OF RHODE ISLAND AS CERTIFICATE HOLDER AND AS AN ADDITIONAL INSURED. FAILURE TO COMPLY WITH THESE PROVISIONS MAY RESULT IN REJECTION OF THE OFFEROR'S BID. ANNUAL RENEWAL CERTIFICATES MUST BE SUBMITTED TO THE AGENCY IDENTIFIED ON THE PURCHASE ORDER. FAILURE TO DO SO MAY BE GROUNDS FOR CANCELLATION OF CONTRACT.				

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	<p>NOTE: IF THIS BID COVERS CONSTRUCTION, SCHOOL BUSING, HAZARDOUS WASTE, OR VESSEL OPERATION, APPLICABLE COVERAGES FROM THE FOLLOWING LIST MUST ALSO BE SUBMITTED TO THE DIVISION OF PURCHASES PRIOR TO AWARD:</p> <ul style="list-style-type: none"> * PROFESSIONAL LIABILITY INSURANCE (AKA ERRORS & OMISSIONS) - \$1 MILLION OR 5% OF ESTIMATED PROJECT COST, WHICHEVER IS GREATER. * BUILDER'S RISK INSURANCE - COVERAGE EQUAL TO FACE AMOUNT OF CONTRACT FOR CONSTRUCTION. * SCHOOL BUSING - AUTO LIABILITY COVERAGE IN THE AMOUNT OF \$5 MILLION. * ENVIRONMENTAL IMPAIRMENT (AKA POLLUTION CONTROL) - \$1 MILLION OR 5% OF FACE AMOUNT OF CONTRACT, WHICHEVER IS GREATER. * VESSEL OPERATION - (MARINE OR AIRCRAFT) - PROTECTION & INDEMNITY COVERAGE REQUIRED IN THE AMOUNT OF \$1 MILLION. 				

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1.0	<p>VENDOR (OWNER OF COMPANY) IS RESPONSIBLE TO COMPLY WITH ALL LICENSING OR STATE PERMITS REQUIRED FOR THIS TYPE OF SERVICE. A COPY OF LICENSE/PERMIT SHOULD BE SUBMITTED WITH THIS BID. IN ADDITION TO THESE LICENSE REQUIREMENTS, BIDDER, BY SUBMISSION OF THIS BID, CERTIFIES THAT ANY/ALL WORK RELATED TO THIS BID, AND ANY SUBSEQUENT AWARD WHICH REQUIRES A RHODE ISLAND LICENSE(S), SHALL BE PERFORMED BY AN INDIVIDUAL(S) HOLDING A VALID RHODE ISLAND LICENSE.</p> <p>ADDITIONAL SPECIFICATIONS AND/OR DRAWINGS ARE AVAILABLE TO BE PICKED UP AT NO CHARGE AT THE DIVISION OF PURCHASES, ONE CAPITOL HILL, 2ND FLOOR, PROVIDENCE, RI BETWEEN 8:30 AM AND 3:30 PM WEEKDAYS (EXCLUDING RHODE ISLAND STATE HOLIDAYS), OR UPON MAILING OR FAXING A WRITTEN REQUEST INCLUDING A FEDERAL EXPRESS PREPAID AUTHORIZATION NUMBER TO "COMMUNICATIONS COORDINATOR" (FAX# 401-222-6387). THE BID NUMBER MUST BE CLEARLY REFERENCED.</p> <p>340-16</p> <p>TOTAL COST TO FURNISH & INSTALL A FIRE-ALARM (FA) MASTER BOX IN SEVEN (7) DESIGNATED BUILDINGS, AND CONNECT EACH OF THE SEVEN (7) TO THE EXISTING CAMPUS IMSA 20-2 UNDERGROUND FA CABLE SYSTEM, AND EXTEND THE EXISTING SIEMENS BT FIBER-OPTICS-SUPPORTED FA (& TROUBLES) NOTIFICATION SYSTEM TO 15 DESIGNATED BUILDINGS. (PER SPECIFICATIONS)</p>	1.00	TOTAL		

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	<p>WE HAVE INCLUDED THE \$15,000.00 UNEXPECTED REPAIRS ALLOWANCE FROM SECTION 4 OF THE SPECIFICATIONS IN THE ABOVE BASE BID.</p> <p>ADD ALTERNATE ONE:</p> <p>INDICATE THE ADDITIONAL COSTS (TO BE ADDED TO BASE BID PRICE) WHICH APPLY WHEN THE COLLEGE DIRECTS THE CONTRACTOR TO USE THE SEPARATE, QUALIFIED SUBCONTRACTOR (A) TO PROPERLY FIRE-STOP AND SEAL ALL CURRENTLY EXISTING PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES (TO INCLUDE: WALLS, FLOORS, CEILINGS) IN 7 DESIGNATED BUILDINGS; AND (B) TO THEREBY RESTORE THE INTEGRITY (AND RATING) OF ALL SUCH FIRE-RATED ASSEMBLIES. THE SUBMITTALS TO THE BUILDING COMMISSIONER (AND THE OTHER APPROVAL AGENCIES LISTED IN THESE SPECIFICATIONS) ARE TO IDENTIFY THE MANUFACTURER OF THE FIRE-STOPPING MATERIALS; AND INCLUDE SPECIFICATIONS AND CATALOG CUT SHEETS FOR THE EXACT MATERIALS AND PRODUCTS WHICH WILL BE USED FOR FIRE-STOPPING OF THE EXISTING PENETRATIONS; AND ALSO INCLUDE THE COLOR-CODING SCHEDULE(S) ASSOCIATED WITH THESE FIRE-STOPPING MATERIALS FOR ALL THE LISTED PENETRATION SIZES. THE CONTRACTOR WILL BE PAID FOR PROPERLY SEALING AND FIRE-STOPPING ALL OF THESE EXISTING PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES ON A UNIT COST BASIS. THEREFORE, PLEASE INDICATE THE UNIT COSTS AND TOTAL COSTS OF FIRE-STOPPING THE FOLLOWING ESTIMATED QUANTITIES OF PENETRATIONS OF THE SIZES INDICATED:</p>				

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	ESTIMATED QUANTITY: 25 SIZE OF PENETRATION: < 2-1/2" DIAMETER UNIT COST \$ _____ TOTAL COST \$ _____ ESTIMATED QUANTITY: 20 SIZE OF PENETRATION: 2-1/2" DIAMETER OR LARGER BUT < 6" DIAMETER & < 5" X 5" SQUARE UNIT COST \$ _____ TOTAL COST \$ _____ ESTIMATED QUANTITY: 20 SIZE OF PENETRATION: 6" DIAMETER AND LARGER, TO INCLUDE IRREGULARLY SHAPED PENETRATIONS > 5" X 5" SQUARE UNIT COST \$ _____ TOTAL COST \$ _____				

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	OVERALL TOTAL COST OF ADD ALTERNATE ONE: \$ _____ THE 7 DESIGNATED BUILDINGS ARE: ART CENTER BARNARD SCHOOL FOGARTY LIFE SCIENCE BUILDING MANN HALL CRAIG-LEE HALL SWEET HALL THORP HALL DELIVERY TO THE FOLLOWING LOCATION: RHODE ISLAND COLLEGE PHYSICAL PLANT 600 MT. PLEASANT AVENUE PROVIDENCE, RI 02908 CONTACT PERSON: EDWARD BRADY OR JOHN VICKERS (401) 456-8262 DELIVERY OF GOODS OR SERVICES AS REQUESTED BY AGENCY.				

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	STARTING DATE _____ NO. OF WORKING DAYS REQUIRED FOR COMPLETION _____			TOTAL:	_____

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RHODE ISLAND COLLEGE

RENOVATION OF CAMPUS FIRE-ALARM (FA), AND ON-CAMPUS FA & "TROUBLES" NOTIFICATION SYSTEMS

SPECIFICATIONS

1. GENERAL.

1.1 Contract Purpose.

Rhode Island College is using this contract to CONNECT the following listed 7 buildings to the existing Campus low-voltage, IMSA 20-2 underground fire-alarm (FA) cable system; so that EVERY fire-alarm from EACH building's existing (mostly antiquated, non-addressable) FA panel will thereafter be transmitted directly (immediately) to the Providence Fire Department (FD). These SEVEN buildings are: Art Center; Barnard School; Fogarty LS Building; Mann, Craig-Lee, Sweet and Thorp Halls. **The Master Box and FA System in Browne Hall are already connected to the Campus underground IMSA 20-2 cable system; and are already capable of transmitting fire-alarms directly to the Providence FD.**

The SECOND, EQUALLY IMPORTANT purpose of this Contract is to EXTEND the **Existing** Siemens Building Technologies (BT) fiber-optics-supported FA and "troubles" notification system in order to provide simultaneous notification of all FA and immediate notification of all troubles to our Campus Security Department (located in Browne Hall) for the following listed FIFTEEN buildings: Art Center; Barnard School; Fogarty LS Building; Mann, Craig-Lee, Gaige, Browne, Sweet, Thorp, Weber and Willard Halls; Adams Library; Donovan DC; Murray Center; and Building One.

All work performed by the Contractor in order to accomplish the requirements of this Contract is to comply with all applicable specifications of the current RI Fire Code, and all RI laws pertaining to FA systems for higher-education buildings (to include recent changes); and is to enhance life-safety conditions for the students and building occupants who use these facilities. Contractor is to furnish and install a Gamewell (or Providence-FD-Approved Equal) local-energy master box in EACH of the 7 designated buildings; plus the associated FA wiring and conduit systems

In addition, the **Contractor is also responsible for developing the detailed Master Box and FA wiring (and conduit) systems design and layout Plans; and for the submission of Shop Drawings** for the Contractor's master box and existing FA panel and wiring (and conduit) systems to the State Fire Marshal and to the Providence Fire Department's (FD) Telecommunications Section (R. Vespiar, 243-6008) for APPROVAL prior to the actual installation. If requested, a set of large-scale plans (1/8" per foot) shall be given to the successful bidder to facilitate the design and development of the necessary FA System Plans and shop drawings. Furnishing and installation of the associated FA System components; hangers; pipe sleeves and fire-stop systems; electrical controls and fire-alarm system interconnections; electrical conduits, fittings,

boxes, wiring, relays, switches, connectors; plaster ceilings' skim-coats installation and repairs; wall restorations; anchoring of conduit supports and hangers into concrete; and similar requirements are also included in the BASE BID of this contract.

Contractor is to use a separate, qualified subcontractor: (a) to **properly fire-stop and seal all new penetrations** which the fire-alarm system installation technicians make through fire-rated assemblies (to include: walls, floors, ceilings); and (b) to thereby **restore the integrity (and rating) of all such fire-rated assemblies**. The submittals to the Building Commissioner (and the other approval agencies listed in these Specifications) are to identify the manufacturer of the fire-stopping materials; and include specifications and catalog cut sheets for the exact materials and products which will be used for fire-stopping; and also include the color-coding schedule(s) associated with these fire-stopping materials. The costs of properly sealing and fire-stopping all of these master box, and FA wiring and conduit systems' penetrations through fire-rated assemblies are to be included in the contractor's Base Bid.

ADD ALTERNATE ONE: Indicate the additional costs (to be added to the BASE BID price) which apply when the College directs the Contractor to use the same separate, qualified subcontractor: (a) to **properly fire-stop and seal all currently existing penetrations through fire-rated assemblies** (to include: walls, floors, ceilings) in 7 designated buildings**; and (b) to thereby **restore the integrity (and rating) of all such fire-rated assemblies**. The submittals to the Building Commissioner (and to the other approval agencies listed in these Specifications) are to identify the manufacturer of the fire-stopping materials; and include specifications and catalog cut sheets for the exact materials and products which will be used for fire-stopping of the existing penetrations; and also include the color-coding schedule(s) associated with these fire-stopping materials for all of the listed penetration sizes. The contractor will be paid for properly sealing and fire-stopping all of these existing penetrations through fire-rated assemblies on a unit cost basis. Therefore, please indicate on the **Bid Documents** the unit costs and total costs of fire-stopping the following estimated quantities of penetrations of the sizes indicated:

<u>Estimated Quantity</u>	<u>Size of Penetration</u>	<u>Unit Cost</u>	<u>Total Cost</u>
25	< 2-1/2" Diameter		
20	2-1/2" Diameter or Larger BUT < 6" Diameter & < 5" x 5" Square		
12	6" Diameter and Larger, to include Irregularly Shaped Penetrations > 5" x 5" Square		

OVERALL TOTAL COST OF ADD ALTERNATE ONE: \$_____

** The 7 designated buildings are: Art Center; Barnard School; Fogarty LS Building; Mann, Craig-Lee, Sweet and Thorp Halls.

1.2 Pre-Bid-Submittal Site Inspection. Each contractor submitting a bid is to survey all of the rooms (in which existing FA and Siemens BT panels are located), corridors, and spaces shown on the attached 21 PLANS; and the existing, exterior FA cables terminal box in the H. Barnard School's 1st floor telecommunications room. The Bid Announcement distributed by the RI Division of Purchases will indicate the date, time and location of a pre-bid meeting for all bidders. Attendance at this meeting is mandatory. Contractor is to verify all pertinent measurements and quantity requirements before submitting the bid.

1.3 Pre-Construction Planning and Schedule. Immediately after being awarded this Contract, the Contractor is to arrange a pre-construction meeting with the College Engineer (456-8262) **before starting:** fire-alarm (FA) wiring and conduits systems planning and design; shop drawing development; or actual master box and FA wiring (and conduit) systems installation work. Representatives of Siemens BT and of any other subcontractors are also to attend this meeting. At this pre-construction meeting, Contractor is to furnish the specified submittals and a thorough briefing on the planned master box and fire-alarm (FA) wiring (and conduit) systems design and installation procedures. The scheduling objective is the **completion of all work under this Contract before 21 August 2006. For the Bid, Contractor is to assume that all work required by this Contract can be performed during normal contractor working hours.** Actual design, shop drawing preparations and, after their approval, master box and FA wiring (and conduit) systems installation work should ALL start as soon as possible. The Contractor's schedule will be reviewed at this pre-construction meeting to ensure that the systems' installation is scheduled to the mutual agreement of the College and the Contractor; since all of the 15 Campus buildings (involved in this Contract) will continue to be occupied and in full operation (24 - 7) throughout the duration of this Contract.

1.4 Contractor Qualifications. **Comply with all appropriate standard practices and applicable fire codes associated with the design and installation of FA systems.** The installation of the master box and FA wiring (and conduit) systems, FA components and all electrical service and controls lines, wiring, conduits, boxes, relays and contacts, switches, circuit breakers, disconnects, connections and associated electrical equipment (and related electrical systems improvements) required by this Contract are to be performed by a Rhode Island licensed fire-alarm or electrical contractor. Each fire-alarm subcontractor and electrical subcontractor must have a Master Fire-Alarm Contractor's License or Master Electrical Contractor's License, respectively, valid in Rhode Island. Any required welding is to be accomplished by a RI-certified welder. Siemens Building Technologies (BLT) will be a subcontractor for this Contract.

1.5 Laws, Permits. Contractor is to comply: with all applicable federal and state laws, regulations, rules, ordinances and codes **(to include the latest Fire-Code laws and requirements recently changed and promulgated by the State of RI: of which Chapter 13 also applies);** and with any applicable provisions in other Codes specifically referred to by the RI Fire Codes (as changed). The Contractor DOES need to obtain (and pay for) a permit from the State Building Commissioner, One Capitol Hill,

Providence (401-222-3032). In addition, the Providence FD Telecommunications now charges a Plan Review Fee of \$350 to \$400, depending on the total contract cost.

1.6 Materials and Workmanship. Materials and workmanship shall be the best of their respective kinds; work will be accomplished in a neat and workmanlike manner in full accord with modern construction methods, and with all applicable State Codes. All equipment and materials furnished and installed for this contract are to be new; of current production; in conformance with the standards of UL, Inc., and NEMA, ASA, IEEE; in conformance with accepted industry standards; and are to be of American manufacture; exceptions require ADVANCE College Engineer approval.

1.6.1 Samples and Submittals. As soon as possible, Contractor shall submit, for approval:

(a) Samples: None.

(b) Shop Drawings of the following:

Each master box and FA wiring (and conduit) systems Plan for the 7 designated buildings. (Each Plan is required prior to the start of installation work in that building.) These shop drawings should clearly indicate **all interconnections** of the fire-alarm (FA) system being installed under this contract with the existing Campus-wide FA system and with equipment located in the College Security Department Offices; and with any other utility system, to include the building's existing electrical system. This FA System Contractor is responsible for engineering and installing a complete and useable FA System which complies with all fire and electrical Codes (to include recent changes) and with City of Providence Telecommunications Section requirements to include: all required existing electrical system and existing Campus FA cables system interconnections. **BEFORE SUBMITTING THE FIRE-ALARM SYSTEM PLANS TO THE STATE FIRE MARSHAL AND CITY OF PROVIDENCE TELECOMMUNICATIONS SECTION FOR APPROVAL, BRIEFLY REVIEW THE PROPOSED ROUTING OF ALL CONDUITS AND COMPONENTS WITH THE COLLEGE ENGINEER since per Notes 4, 23 and 33 of the PLANS, CONTRACTOR IS TO FURNISH AND INSTALL ALL REQUIRED FA COMPONENTS, CONDUITS AND WIRING SYSTEMS CONCEALED ABOVE PLASTER AND (SHEETROCK AND) SUSPENDED CEILINGS OR WITHIN WALLS (except for master boxes); or else construct chases to conceal them.** After the shop drawings have been reviewed and approved by the State Fire Marshal and City of Providence Telecommunications Section, the Contractor will make any necessary revisions and then proceed to install the fire-alarm master box and FA wiring (and conduit) systems as finally approved.

(c) Catalog "cuts" which adequately identify and describe the fire-alarm controls wiring and conduits/raceways; any required contactors, relays, control units, and transformers; the master boxes; which the Contractor proposes to install for this Contract. At least one copy of each Catalog Extract is to consist of Original printed sheets (NOT all photocopies).

1.6.2 Conduit. All conduit shall be of the size required by the latest edition of the electrical code for the number of wires indicated. Minimum conduit size shall be 3/4 inch (interior). Appropriate, standard boxes and fittings are also to be furnished and installed. Contractor shall furnish and install all junction boxes, pull boxes and fittings required for the installation of the work; boxes shall be of code gauge and the smallest appropriate size required for the particular installation. Any conduits and electrical equipment which must be relocated or installed within the building are to be installed so that all conduits and wiring are located **concealed** (exceptions require advance Engineer approval). **Any pre-approved exposed conduit (and fittings, boxes, connectors and accessories) must be wire-mold or Equal**; elsewhere, standard EMT and associated fittings are to be used; or MX cable (please see the PLANS). Any required raceways shall be furnished and installed complete with all necessary fittings, boxes, connectors and accessories. Raceway systems shall be UL listed. All hanger components shall be UL-listed; contractor is to use enough, sufficiently strong hanger systems to properly support the entire FA conduit system and components (plus an occasional additional load) without any deflections, sagging, looseness. All hangers are to be attached to the building's structure; and are to be in compliance with all applicable Code requirements.

1.6.3 Electric Wiring. Specified gauge sizes refer to American Wire Gauge, 98.5% conductivity. Interior Wiring is to be copper wire, soft-drawn and annealed, with THHN insulation: rated 600 volts, and dual-rated 75°C wet and 90°C dry. Wire will be sized in accordance with the Electrical Code for the operating current of the equipment being supported (allowing for starting current). No wire shall be smaller than #14 without College Engineer approval. However, Exterior Wiring is to be copper wire, soft-drawn and annealed, no smaller than #10, but with THWN insulation. Furnish and install the Providence-FD approved IMSA 20-2 Three-Pair 14-Gauge cable per the PLANS (please see Notes 14, 31, 35, 43, 49, 54, 59). All wire and wire sizes shall conform to applicable electrical codes and AIEE Standards. Contractor shall furnish and install all wiring taps, terminals, connectors, splices, conduit and cable supports in compliance with applicable electrical codes and generally accepted construction practices in RI. Wire joints in circuit work shall be Buchanan "B-Cap", Ideal "Wire Nut" # 452 or 453, "Scotchlock Type R", or T & B "Sta-Kon".
TYPE MC CABLE MAY BE USED IN CONCEALED LOCATIONS; ALL CONDUIT AND WIRING SYSTEMS MUST BE CONCEALED.

1.6.4 Master Box. Furnish and install a Gamewell (or Providence-FD-Approved EQUAL) local-energy master box in the 7 designated buildings.

1.6.5 Cleaning Materials. To clean a given surface, only those cleaning materials are to be used which are recommended by the manufacturer of the surface to be cleaned.

1.6.6 Finished Surfaces Work. Damages to walls, ceilings, floors (such as smeared, scratched or gouged masonry members or sheetrock) will be completely finished (painted as appropriate) so as to match the finish, texture and surface plane of adjacent surfaces. Any damages to the existing bricks are to be concealed by a caulking; or

such bricks are to be replaced, and mortared-in. Spot painting of any damage repairs to the walls will be required. COMPLY WITH NOTES 4, 23 and 33 on the PLANS.

1.6.7 Caulking. Except in fire-rated assemblies, caulking material for all drilled holes, new penetrations and existing penetrations is to be: (a) two-component polysulfide, mixed on site, for joints between dissimilar materials and substrates; or (b) GE silicone (Silpruf) sealants for metal-to-metal joints.

1.6.8 Insulation. For fire-rated assemblies within the building, use Fire-Safing foam insulation (US Gypsum's Thermafiber or equal) to **completely fill all voids** between the building's components and the sleeves; and between the sleeves and the accommodated conduit. Such Fire-Safing insulation is to be the type accepted by the Fire Marshal for use in sealing penetrations through fire-walls.

1.6.9 Anchors, Bolts, Inserts and Sleeves. Anchors, bolts, conduit hangers and miscellaneous fasteners shall be provided where necessary for fastening work in place and shall be as necessary for their intended purpose. They shall be drilled-into and embedded in concrete and masonry as appropriate; or securely fastened to the existing masonry or structural components. The entire FA components supporting (and fasteners) system shall comply with the requirements of all applicable codes. Sizes, kinds and spacing of anchors not indicated nor specified shall be as necessary for their purpose. Zinc-coated inserts of suitable and approved types shall be provided where necessary for the support of pipes, conduits, equipment, apparatus and other work. Zinc-coated steel pipe sleeves of suitable size shall be provided where conduits pass through floors, roofs or walls. Steel supports for the fittings, conduits, fixtures and equipment shall be provided as indicated and as required for complete and top-quality installation. Lack of indications in the PLANS and Specifications of items obviously needed to properly satisfy all work requirements of this project, such as attachments, bolts, hangers, and other fastening devices, shall not relieve the Contractor from the responsibility for furnishing and installing these items.

1.6.10 Backfill Materials. Not Applicable. Per Note 11 on the PLANS, **the College Engineer has determined that no excavation will be required to accomplish this FA & notification systems renovations contract.**

1.6.11 Loam, Fertilizer and Grass Seed. Not Applicable.

1.6.12 Steel. All basic steel products (e.g., hangers; support angles, bolts, nuts, lock washers; leveling shims) for this Contract (excludes piping) are to be of mild steel (yield strength of 30,000 or 36,000 psi). Connecting bolts, nuts, lock washers; shims; anchor bolts; and bolts installed exterior to the building or inserted into concrete and floor slabs shall be of galvanized steel (and bent cold).

1.6.13 Concrete; Reinforcing Mesh. Not Applicable.

1.7 Substitution of Materials. Equipment and materials identified by manufacturer in these specifications for installation under this Contract are not to be substituted for "equal" or "equivalent" materials. However, any contractor proposing to supply and install "equal" materials will so notify the State Purchasing Officer at least 96 hours prior to bid submittal. This Officer will consult with the College Engineer to determine whether such materials are, in fact, acceptable equal products before awarding the contract to such a low bidder [who is offering the "equal" product(s)].

1.8 Storage of Materials. Throughout the project, all fire-alarm and notification systems components and materials are to be kept completely dry and above 40°F prior to and during application. We plan to achieve a mutual agreement with the Contractor for the inside storage of all materials needed for this Contract. However, any exterior storage is to include the stacking of materials on 4-inch high pallets and covering them with waterproof tarpaulins until they are used. To summarize, all materials are to be stored in a place and manner which protect them from damage and the effects of weather. Flammable materials are not to be stored inside buildings.

1.9 Protection of Work and Property. The Contractor shall safely protect the personnel and property of the College and all adjacent property (as well as the Contractor's materials, equipment and employees) from loss, injury or damage; and shall repair, replace and/or compensate any damage, injury or loss resulting from this project. The College shall not be responsible for Contractor equipment/security.

1.10 Manufacturer's Directions. All manufacturer's articles, materials and other equipment shall be supplied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer's instructions unless otherwise approved by the College Engineer.

1.11 Clean-Up. During and after completion of this project, the Contractor shall leave the area in a clean and orderly condition - which is acceptable to the College. This requirement includes: the use of polyethylene barriers to prevent the spread of dust (particularly during drilling and core-drilling operations; and when working in the vicinity of computer equipment of any type); the vacuuming of interior spaces until no construction dust nor debris remains. Excess and unsuitable materials and debris will be removed from Campus by the Contractor. The Contractor shall also remove all marks, stains, fingerprints and other soil or dirt from all painted, decorated and similarly finished surfaces; and repaint such areas as necessary. Final payment will be withheld until all clean-up operations are satisfactorily completed.

1.12 Payment. Partial payments may be negotiated; 10% retentions apply. **Unless advance College Engineer approval has been obtained**, invoices may not be processed by the College. Please submit a schedule of values and use the AIA payment documents. Upon work completion, the College Engineer is to be notified, and will conduct with the Contractor's representative a joint physical check of the quality and extent of the fire-alarm and notification systems installation work. This is necessary to insure prompt payment.

1.13 Guarantee. The Contractor shall leave the facility in proper working order and shall replace any work, material, or equipment provided by him or her under this contract which develops defects, except those caused by vandalism, within 1 year from the date of final acceptance by the College, without additional expense to the College.

2. SCOPE OF CONTRACT. Contractor is to furnish all Engineering, layout, labor, materials, services, scaffolding, equipment and supervision necessary for the required installation, in SEVEN designated buildings, of a 100% operational, fully functional, Gamewell local-energy master box including Contractor-installed connections both to the existing (antiquated, non-addressable) FA panel and to the existing Campus IMSA 20-2 underground FA cable system; so that EVERY fire-alarm will thereafter be transmitted directly, and immediately, to the Providence FD. These SEVEN buildings are: Art Center; Barnard School; Fogarty LS Building; Mann, Craig-Lee, Sweet and Thorp Halls. **The Master Box and FA System in Browne Hall are already connected to the Campus underground IMSA 20-2 cable system; and are already transmitting fire-alarms directly to the Providence FD.**

Contractor is also to furnish all Engineering, layout, labor, materials, services, scaffolding, equipment and supervision necessary for the required extension of the existing Siemens BT fiber-optics-supported FA and "troubles" notification system in order to provide a 100% operational, fully functional, simultaneous notification of all FA and immediate notification of all troubles to our Campus Security Department (located in Browne Hall) for the following listed FIFTEEN buildings: Art Center; Barnard School; Fogarty LS Building; Mann, Craig-Lee, Gage, Browne, Sweet, Thorp, Weber and Willard Halls; Adams Library; Donovan DC; Murray Center; and Building One.

The first attached PLAN: Underground Fire Alarm Cables (& Pedestals) System depicts the underground IMSA 20-2 cable system that transmits alarms from our West Campus buildings directly to the Providence FD; not shown is an overhead cable that transmits alarms from our East Campus buildings directly to the Providence FD. This PLAN also serves as a map locating the 15 buildings in this Contract. All of the detailed Contract requirements for installation of equipment, conduits and wiring systems (to transmit alarms to the Providence FD and notifications of alarms and troubles to Campus Security) are identified on the 20 attached PLANS following the first PLAN.

All required electrical fire-alarm components and devices installation, wiring and conduit systems; and notification systems wiring and conduit systems are to be included in this contract. The connection of the fire-alarm system to the Campus' existing underground fire-alarm cable system is required for 7 buildings: to obtain building systems which send alarms directly to the Providence FD, but with connections to the existing Siemens BT panels in order to provide simultaneous notification of alarms to the College Security Department: both printer recording and computer display. This latter system is also to transmit trouble notifications to the College Security Department (both printer recording and computer display). **The Master Box and FA System in Browne Hall are already connected to the Campus underground IMSA 20-2 cable system; and are already transmitting fire-alarms directly to the Providence FD.**

As stated in the PLANS (Notes 25 and 34), for SEVEN designated buildings, the contractor is to develop detailed Master Box and Fire-Alarm Wiring (and Conduit) Systems Installation Plans (to include EACH FA System's connection to the existing Campus underground IMSA 20-2 cable system), as depicted on the accompanying 21 PLANS; and is then to obtain the required approvals (from the agencies listed in Para. 1.1) for these FA System Plans. Accomplish the preliminary review of the proposed fire-alarm conduit locations with the College Engineer. After receipt of all required approvals, furnish and install the complete and 100% operational fire-alarm systems per the approved Shop Drawings (Plans) and in accordance with the first 15 attached PLANS.

In addition, for the 15 designated buildings, Contractor is to extend the existing Siemens BT fiber-optics-supported FA and "troubles" notification system in order to provide a 100% operational, fully functional, simultaneous notification of all FA and immediate notification of all troubles to our Campus Security Department (located in Browne Hall). Accordingly, into EACH building's main FA panel, Contractor is to furnish and install TWO normally-closed relays to operate the Siemens BT Panel-to-Security-Department notification system (one to open for fire-alarms; and one to open for troubles). From and connected to the 2 Siemens system relays: furnish and install 4 copper #14 cables (THHN), plus any required ground wires, in a 3/4" D EMT conduit system; and connect same into the existing Siemens BT HVAC controls panel for that building. The Siemens subcontractor will make the required connections within the panel; and will reprogram the existing notification-system computer so that each fire-alarm and trouble will: produce an audible signal in the Campus Security office; and will cause the following information to appear on both the existing FA monitor and the existing FA printer in that office:

Date & Time; Building Name; Fire-Alarm OR Date & Time; Building Name; "Trouble"

The College will suggest a conduit-system routing for each building. Furnish and install also all required fittings, elbows, LB's, boxes, hangers and similar materials; and make all required connections and terminations.

The 21 attached Renovation of Campus Fire-Alarm and On-Campus Alarm Notification PLANS further identify the work requirements of this Contract and are officially incorporated into these Specifications. These PLANS are diagrammatic only and are not intended to show every detail of construction, nor the location of the fire-alarm and notification systems wiring. All master box and Knox box installations, all fire-alarm and notification systems' wiring and conduit systems (and the associated controls wiring systems) shall be complete, to include all minor parts not specifically noted on the PLANS, but required for properly functioning fire-alarm and notification systems; all fire-alarm system work of this Contract **shall conform to all applicable codes.** (As described in Notes 14, 31, 35, 43, 49, 54, 59), Contractor must also furnish and install a separate conduit and wiring (3-pair 14-Gauge IMSA 20-2 cable) system, connecting EACH new Master Box to the end of the existing exterior IMSA 20-2 FA cable located in that building's electric (or mechanical) room. Furnish and install any required lockable hinged junction box covers in that mechanical or

electric room. In the presence of the appropriate Providence FD supervisor (Mr. Frank Duffy or his designee), furnish the "jumper" cable and thereby connect this underground cable into our existing Campus underground FA cable system (for transmitting fire alarms directly to the Providence FD).

For every Campus building, the available electrical system is 120/208 Volts, 3-Phase, 4-Wire. Contractor is also responsible for all work lay-out, elevations, measurements, leveling and alignment. **REGARDLESS OF ANY ERRORS OR INADVERTENT OMISSIONS IN THESE PLANS AND SPECIFICATIONS, CONTRACTOR IS TO FURNISH AND INSTALL SUFFICIENT AND PROPER MATERIALS AND EQUIPMENT (MANUFACTURED FOR THIS PURPOSE) TO PROVIDE SAFE, EFFICIENT, 100% OPERATIONAL FIRE-ALARM TRANSMISSION SYSTEMS (DIRECT TO THE PROVIDENCE FD) IN 7 BUILDINGS; and ON-CAMPUS FA AND "TROUBLE" NOTIFICATION SYSTEMS IN 15 BUILDINGS:** in full compliance with all applicable codes (to include the latest changes to the RI Laws and Fire Code), and with modern Engineering standards and practices for such systems.

Please Note: this Contract excludes the cost of removing and replacing any asbestos-containing materials (ACM) (such as ceiling materials, pipe insulation or floor tiles) which the Contractor may encounter; if any ACM must be removed to allow this Contractor to complete the Contract, the College will remove such ACM AT NO EXPENSE NOR LIABILITY TO THIS CONTRACTOR.

3. DETAILED REQUIREMENTS.

3.1 Deleted.

3.2 Deleted.

3.3 Deleted.

3.4 Fire Alarm System. Furnish and install: the 7 required local-energy master boxes and Knox boxes; and all required wiring and conduit systems; and associated components required for the proper operation of these systems; to include all FA system components depicted on the Fire Alarm System Shop Drawings or Plans which this contractor is to develop, submit and have approved by the State Fire Marshal and Providence Fire Department Telecommunications Section (R. Vespiar, 243-6008). Furnish and install all other required wiring and conduit materials and systems.

3.5 Deleted.

3.6 Conduit Requirements. Route conduits as required to avoid obstructions. Conduits will or will not be allowed to pass through structural members, depending on their sizes and drill-hole locations; review all such requirements with the College Engineer. Provide all required boxes, fittings (elbows, tees), similar materials; make all required connections.

3.7 Hanger Requirements. All conduits shall be adequately supported from the building's structure by means of approved hangers and supports. The entire support systems for all required conduits and equipment are to be furnished and installed (and hangers spaced) in complete accordance with any applicable specifications in the current RI Fire Codes and Laws (to include recent changes) and with applicable Electric Code requirements.

3.8 FA System Installation Requirements. Furnish and install: all required master boxes, components, wiring systems and conduits, per the Shop Drawings or Plans developed by the Contractor and approved by the State Fire Marshal and Building Commissioner, and by the City of Providence Telecommunications Section; all in accordance with the recently revised State Codes. All fire-alarm conduit routes shall be reviewed by the College Engineer prior to installation. This contractor shall be responsible for reviewing the architectural and structural drawings to verify ceiling types and areas with limited clearance. **All conduits shall be concealed above ceilings, within walls or in unoccupied spaces.**

3.9 Testing, Start-Up, and Training Requirements. Contractor is to arrange for representatives of the State Fire Marshal, Building Commissioner, the City of Providence Telecommunications Section: to accompany him or her, and to witness all required testing of the fire-alarm system and of the associated fire-alarm/controls-wiring systems. Conduct all required tests until the Systems are approved and accepted: all in accordance with applicable State Codes (to include recent change requirements). Certificates of approval and acceptance by the State Fire Marshal, Building Commissioner, the City of Providence Telecommunications Section shall be submitted to the Engineer.

3.9.1 Start-Up and Training Operations. No later than 21 August 2006, Contractor is to conduct start-up operations (and personnel instruction). The start-up operations we envision include actual start-up and systems adjustments; complete system demonstration and performance verification; the furnishing of maintenance data and parts lists; the setting and adjustment of all controls and accessories; complete trouble-shooting and the provision of a trouble-shooting guide. The required testing is to include ALL equipment installed by this contract. Contractor will instruct the College's Engineer and Physical Plant personnel on the operation and maintenance requirements of all equipment being installed. One ORIGINAL and 2 photo-copies of all pertinent operation and maintenance literature for this project will be submitted to the Engineer.

3.9.2 Maintenance. Deleted.

3.10 Deleted.

3.11 Deleted.

3.12 Cleaning. After all installation work is completed, accomplish all cleaning operations required by Paragraph 1.11; the objective is to leave each facility in a 100% clean, ready-to-occupy condition – even if your personnel did not cause all of the dust and debris to be removed.

4. EXISTING SYSTEMS UNEXPECTED REPAIRS ALLOWANCE.

EACH CONTRACTOR SUBMITTING A BID IS TO INCLUDE AN ALLOWANCE OF \$15,000 IN THE BID TO COVER UNEXPECTED COSTS; SUCH AS, FOR EXAMPLE, THE COSTS OF MAKING ADDITIONAL (OTHER THAN SPECIFIED) BUT UNANTICIPATED REPAIRS ON THE EXISTING ELECTRICAL SYSTEMS; PLUS THE COSTS OF MAKING ANY ADDITIONAL CHANGES AND IMPROVEMENTS which may be required as a result of the State Building Commissioner and State Fire Marshal and Providence Telecommunications Section reviews of these PLANS and Specifications.

Compensation for accomplishing these repairs or improvements, and for making any other necessary changes or additional equipment installation required as a result of the fire-marshal (and building commissioner) and telecommunications section reviews will be based on actual labor and materials costs. On work by the contractor's own personnel and workers, a combined overhead and profit of 10% is the maximum that will be approved. On work by a subcontractor, a combined overhead and profit (i.e., mark-up) of 10% for the prime contractor is the maximum that will be approved.

ANY PART OF THE \$15,000 ALLOWANCE NOT SPENT WILL BE CREDITED TO THE COLLEGE AT THE TIME OF FINAL BILLING. IF NO SYSTEMS REPAIRS NOR ADDITIONAL EQUIPMENT INSTALLATION NOR IMPROVEMENTS ARE REQUIRED, THE ENTIRE \$15,000 WILL BE CREDITED TO THE COLLEGE AT THE TIME OF FINAL BILLING.

Whenever requested, proceed to cost-estimate all required (BUT UNANTICIPATED) repairs, improvements and additional equipment installation as requested by the College Engineer. **Use the Rhode Island College Standard Change Order Document (Sample Attached) to submit each proposed Change Order.** Attach the following to EACH Contract Change Order Request document submitted: the estimated personnel hours and applicable (prevailing) wage rate for each trade or skill required to complete the proposed change order; and the detailed list of materials (and unit costs) required. ONLY UPON RECEIPT OF COLLEGE ENGINEER APPROVAL for specific repairs and equipment installation, proceed to accomplish same.

5. FIRE SAFETY REQUIREMENTS.

No open flames nor propane tanks nor torches nor welding equipment are to be used during this FA system replacement contract without prior, specific College Engineer approval.

